

20106



MEMORANDUM

DATE: January 11, 1996 5400.1

TO: L. E. Woods, Ecology, Bldg. T130C, X3378

FROM: *M.B. Murdock*
M. B. Murdock, Ecology, Bldg. T130B, X3560

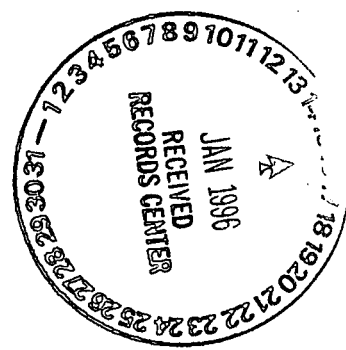
SUBJECT: COMMENTS ON COLORADO NATURAL HERITAGE PROGRAM ASSESSMENT
FINAL REPORT - MBM - 006 - 96

During the January 9, 1996 presentation and meeting to discuss "Natural Heritage Resources of the Rocky Flats Environmental Technology Site and Their Conservation; Phase II The Buffer Zone Final Report" submitted to DOE, RFFO by the Colorado Natural Heritage Program, Cheryl Row asked that comments on the document be transmitted to DOE. Attached are my comments on this document. Some comments are merely identifications of typographical errors, others supply correct data or ask for clarification of some statements.

Should you have questions or require further information, please call me at extension 3560.

MBM:mbm

cc:
C. S. Evans
J. D. Krause
ERPD Records File (2)



ADMIN RECCRD

SW-A-004199

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Document Title:		Natural Heritage Resources of the Rocky Flats Environmental Technology Site and Their Conservation	
Reviewer's Name (s):		Marcia B. Murdock	Date: January 11, 1996
		REVIEWER'S COMMENTS	RESPONSE
Comment No.	Page No.	Comments	Discussion
1	p. ii	I would appreciate having the spelling of my name corrected to read Marcia Murdock. The company should be RMRS.	
2	p. 1	Paragraph 1, line 9, typographic error "...scientifically methodology..."	
3	p. 1	Paragraph 3, line 7, typographical error "... and others Federal and State..."	
4	p. 2	Paragraph 2, Fitzgerald et al. should be 1995, not 1994	
5	p. 2	Paragraph 2: Mountain lions do not seem now to have been restricted to "remote areas", but have shown up in several suburbs including Golden in the last few years. Lions have now been confirmed at the Site. Lions have been reported by Wackenhut for several years, and are frequently reported in the vicinity of the Flats. Other species that do occur here are not mentioned. One bobcat (<i>Lynx rufus</i>) has been recorded, and white-tailed deer (<i>Odocoileus virginianus</i>) are frequently observed as well. In fact for the last several years, a large white-tailed X mule deer hybrid buck has been observed on the Site. His home range area includes several branches in upper Rock Creek. Other hybrids have been recorded in the Woman Creek drainage. It should also be noted that elk do use the Site, though somewhat casually. Elk beds were found in upper Rock Creek during November 1994, and droppings and skeletal remains have been recorded in the Woman and Walnut Creek drainages. If the intent is to list species present, perhaps white-tailed jackrabbits (<i>Lepus townsendii</i>), black-tailed jackrabbits (<i>Lepus californicus</i>), and porcupines (<i>Erethizon dorsatum</i>) should also be added. These species are uncommon at the Site, however. (Please excuse lack of italics, application does not allow their use.)	
6	p. 2	Paragraph 2: Also makes the statement that some "mammals are well represented at the Site" and lists among these beaver, red fox, and gray fox. Sightings of these species are limited to one individual each, so far. If the intent is to	

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		stress diversity, that is accurate, but the statement should be revised so it isn't misleading.	
7	p. 2	Paragraph 3 reference to Braun should perhaps include et al.	
8	p. 3	Paragraph 3 reference to EG&G Rocky Flats should delete "a" from the date.	
9	p. 3	Paragraph 4: the statement is made that most surface water flow is anthropogenically managed. This is accurate for only a portion of the Site. Smart Ditch native water is in fact diverted, along with waters conveyed from Rocky Flats Lake, through the southeast portion of the Site. Several reaches of that stream are not managed, and are not affected by the diversion prior to the diversion point in lower Smart Ditch drainage. Woman Creek is not managed until the point at which the Woman Creek diversion routes water around Pond C-2. This is a flow-through structure as is Pond C-1. Runoff from the Industrial Area is diverted into the South Interceptor Ditch and from there to Pond C-2. The upper portion of Woman Creek is not managed, and water comes largely from emerging seeps. The Walnut Creek drainage is very managed. Rock Creek is not managed at all.	
10	p. 8	It would be extremely helpful if the Conservation Sites on the map were marked with dark dashed lines or some other symbol that will show up on a photocopy. These boundaries cannot be seen if photocopied, and it makes it difficult for the uninitiated reader to understand the concept.	
11	p. 9	Paragraph 4 makes the statement that much of the study area remains in relatively natural condition and only moderately fragmented. Does this statement take into account the extensive and expanding gravel operations of Western Aggregates and the expanding Jefferson County operations? Does it consider DOE's new landfill? These seem like fairly large disturbances in the center of the unit.	
12	p. 10	Paragraph 1 mentions the rare and imperiled butterflies. A statement about where or how, (ie. State listed) might be	

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		useful. Also, the hops blue is not listed on the "Potential Natural Elements in the Study Area" list, why not?	
13	p. 10	Paragraph 3, and general: Scientific names for plants are not in agreement with the Rocky Flats "Current Approved Species List (CASCL)", this probably does not have to be corrected, although all Site contractors have been requested to use this list to allow consistency. The main complaint here is that scientific names are not spelled consistently throughout the document, particularly between the main body and the Rock Creek appendix. This particularly applies to musk thistle in the two documents.	
14	p. 10	Paragraph 4, line 2, typographical error: the word "and" between community and exists	
15	p. 10	Paragraph 4: Why is there no mention of the heavily grazed condition of the study area outside the RFETS boundary? Is this not significant?	
16	p. 10	Paragraph 6: No mention of the xeric tallgrass prairie in Section 2 is made. This Section has an extensive unit of xeric tallgrass prairie, approximately 70 acres of which were burned over in 1994.	
17	p. 11	Paragraph 1: The difference, and greater dominance of needle-and-thread grass may be due to the different soil.	
18	p. 11	Paragraph 4: the Knopf citation is not listed in the references.	
19	p. 11	Maybe we have misunderstood the "Great Plains riparian community" description, but there is a pretty fair coverage of this combination of species, as described, in the Woman Creek and Smart Ditch drainages. There is also a large patch of this community upstream of Pond A-1, and upstream of the Industrial Area in upper Walnut Creek (which actually heads well west of the Industrial Area.) This community in Rock Creek is by no means continuous, as stated in the Rock Creek appendix to this document. The community is patchy in Rock Creek also.	

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20	p. 11	Paragraph 6: Narrow-leaved cattail (<i>Typha angustifolia</i>), broad-leaved cattail (<i>Typha latifolia</i>) is also found at the Site, and in greater numbers. In a large number of cases where cattails occur at the Site, both species are present. All drainages have well developed cattail marshes.	
21	p. 12	Paragraph 1: In the discussion about watercress, the statement is made that it grows at water discharge sites. It would be clearer, perhaps, if it were stated as "seep discharge" sites. Saying water discharge sites makes it sound like pond discharge outfall points. The watercress locations are at seep-springs where groundwater emerges at the bedrock interface or where the groundwater is otherwise forced to the surface.	
22	p. 12	Paragraph 4: The tall shrub complex discussed by CNHP is the same community we have studied and mapped as "tall upland shrubland." On our Site vegetation map, the location and extent of the units are well defined. This unit hosts a number of unusual birds including the chestnut-sided warbler (<i>Dendroica pensylvanica</i>) a suspected breeder, and blue-gray gnatcatcher (<i>Poliophtila caerulea</i>) a confirmed breeder. Blue grosbeaks (<i>Guiraca caerulea</i>) also breed in this community, and it is where we suspect the loggerhead shrike of nesting.	
23	p. 12	Paragraph 5, line 3: The use of the term "laterally upgradient" is confusing and should be clarified.	
24	p. 12	Paragraph 6: <i>Carex oreocharis</i> has been recorded at the Site and resides in the herbarium collection, however its presence at TR02 has not been verified.	
25	p. 13	Paragraph 1, line 6, typographical error "of the its"	
26	p. 13	Paragraph 5, line 6: Merriam's shrew was captured on the 881 Hillside in Operable Unit 1 (Woman Creek drainage). The specimen resides in the voucher collection at RFETS.	
27	p. 14	Paragraph 1: The loggerhead shrikes at the Site are most commonly observed in association with the tall shrub (our "tall upland shrubland") and the Great Plains riparian complex.	

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		One individual has been recorded in ponderosa pines (Wegrzyn and Essington reported that individual). We actually suspect breeding in the tall upland shrublands complex. Please correct the personal communication attributed to Murdock to state this.	
28	p. 14	Paragraph 2: The importance of mesic mixed grasslands, and even the reclaimed grasslands at the Site should not be overlooked as breeding habitat for grasshopper sparrows. The xeric grasslands support the greatest densities, but we find that the grasshopper sparrows will move down the hydrologic gradient in dry years, and can even be found in riparian habitat.	
29	p. 14	Paragraph 3: Information attributed to Murdock has apparently been misunderstood. Black-crowned night herons have now been confirmed as breeding on the Site, but not at Lindsay Pond. Both observations of breeding evidence, the second during 1995, have been at Pond D-1 in the Smart Ditch drainage. Please correct this statement.	
30	p. 14	Paragraph 3: The statement that this is an "artificially created" occurrence is confusing to the uninitiated. Perhaps if the statement said something to the effect that the old stock pond provided and artificially created habitat that had attracted the birds, the point would be easier to understand.	
31	p. 14	Paragraph 6, line 1, typographic error "because it while it"	
32	p. 15	Paragraph 1, line 7, typographical error "many of observations"	
33	p. 15	Paragraph 2, line 3: Is "current isolation" the right term to use here? Is it physical isolation, isolation of a population, protection due to the lack of human activity, or what? Isolation is usually a negative for population viability.	
34	p. 15	Paragraph 2, line 3, typographical error, end of line should be "populations of"	
35	p. 16	Paragraph 1, line 5, typographical error, should read "neither DOE nor any"	

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36	p. 16	Paragraph 4, line 4, typographical error, should read "is worthy of protection"	
37	p. 17	Paragraph 4: The explanation of the atypical boundary could be explained more clearly. It seems that there should be a "therefore statement" after the first and second reasons are introduced, the conclusion is not clearly presented. CNHP has not mentioned the large extent of tallgrass prairie that is on the broad pediment ridge dividing Rock Creek and Walnut Creek. This may be because of the assumption that Walnut Creek does not extend west of the Industrial Area. Walnut Creek, in fact, heads west of Highway 93, and may have been confused with upper Church Ditch. The map of the Rock Creek Macrosite seems to indicate that this ridge is included in the conservation site.	
38	p. 17	Paragraph 4, line 3, typographical error, there is an extra comma after "occurrence" in line 3.	
39	p. 17	Paragraph 4, line 7: The greatest impact to the waters in Woman Creek drainage is currently the diversion of almost the entire flow into Mower Ditch, and thereby to Mower Reservoir. This diversion denies downstream Woman Creek of virtually all water beyond the point of diversion.	
40	p. 18	Paragraph 4: Kindscher 1995 citation not in references	
41	p. 19	Paragraph 2: Several typographical errors including line 1 evolution appears twice in 5 words; line 2 Brewer should be 1995; line 3 an extra "to"; line 5 the citation should be Collins et al.	
42	p. 19	Paragraph 4: How is the Preble's meadow jumping mouse occurrence "fragmented?" Our data show distribution throughout the drainage in what appears to be appropriate habitat. What does the road closure discussion imply? Does this mean weeds are spread through vehicle passage or, weeds are traveling downstream in the water, or what? It should also be noted that many of the Preble's mice that have been captured at the Site have been in weedy vegetation	

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		- it appears to be as much vegetation height and food availability as any other limiting factor.	
43	p. 19	Paragraph 5 has made an assumption based on outdated, or misunderstood information. Dr. Wonder and Dr. Harrington intensively trapped, dug up burrows, and radio-tracked Preble's mice for several weeks in Rock Creek during the summer of 1995. These activities in Rock Creek continued into October.	
44	p. 19	Paragraph 7, sentence 1: "In places" is used twice in the same sentence.	
45	p. 19	Paragraph 7: The aversion to heavy dominance of exotic species in the understory uses a reference on birds. Is this a discussion of birds or the Preble's mouse? Also see comment 40.	
46	p. 19	Paragraph 8 suggests that we "simulate a more natural flow regime" in Woman Creek. It is currently about as "natural" as it can be, with no flow controls until the Mower Ditch diversion which is not under DOE control. The flow in Woman Creek is comprised of seep outflow and precipitation runoff, with no specific management. The Woman Creek bypass allows creek flow to move unrestricted around Pond C-2. Pond C-1 is flow-through only. See comment 37.	
47	p. 20	Paragraph 4: Where did CNHP get the idea we have been using aerial spraying? Herbicide application at the Site is very restricted. Herbicides are applied to specific areas by carefully controlled spray application.	
48	p. 21	Paragraph 2 indicates that Walnut Creek heads downstream from the Industrial area. This is not correct. Walnut Creek heads west of Highway 93, and has been recontoured into upper Church and McKay Ditches and the Walnut Creek bypass west of the Industrial Area.	
49	p. 21	Paragraph 4: We assume the Conservation Site boundary must stop at the east perimeter of the Industrial Area. Appropriate habitat exists west of that point, but has not been evaluated for the presence of the Preble's mouse.	

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50	p. 22	Paragraph 1: Water flows in Rock Creek are always intermittent. There is commonly no flow in lower Rock Creek most of the year. Walnut Creek sees a considerably greater volume of water than any of the other drainages because of the artificially increased flow from domestic water purchased from the Denver Water Board and released after treatment.	
51	p. 22	Last paragraph, line 6, typographical error word should be "may" not my.	
52	p. 23	Paragraph 2, line 4, word missing in "all parties will (be) critical"	
53	p. 25	Paragraph 5: Loggerhead shrikes are suspected to breed in tall upland shrubland (seep shrublands), not ponderosa pines - see comments 21 and 26.	
54	p. 25	Paragraph 5: Merriam's shrews were recorded in the Woman Creek drainage, is the 881 Hillside in the Walnut Creek Conservation Site? See comment 25.	
55	p. 27	Item 3, line 2: RMRS Ecology's program has components that ensure protection of resources such as these, this group coordinates planning to protect these resources.	
56	p. 27	Item 4, line 5, typographical error, first word should be "as"	
57	pp. 29-32	Do pages 29-32 exist?	
58	p. 33	Reference 1, typographical error, Rocky Flats Plant Site(s) is singular.	
59	p. 33	Reference 11, fish should be capitalized.	
60	p. 35	Nelson personal communication should be referenced.	
61	p. 39	Last paragraph, line 1, typographical error, element should be plural.	
62	p. AIII-15	Appendix III, page 15, paragraph 5: Black-crowned night herons are not nesting in Rock Creek, see comment 28.	
63	p. AIII-16	Appendix III, page 16, paragraph 3: Black-crowned night herons are found at Pond D-1. See Comment 28.	

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